

JP09124778 A
PRODUCTION OF POLYLACTIC ACID
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Abstract:

PROBLEM TO BE SOLVED: To obtain a high-molecular-weight polylactic acid free from discoloration, a decomposition product and lactide, having a form suitable for molding, and excellent in heat stability by adding a heavy metal deactivator in the latter half or after completion of polymerization. **SOLUTION:** In this process for producing a polylactic acid by copolymerizing and/or blending lactic acid as the main minimum constituent unit with other resin, polymerization is conducted at 140-160°C to prevent the racemization of a lactide and the discoloration due to decomposition although the polymerization temperature can be 120-250°C. The catalyst used comprises at least one metal selected from those of groups IA, IVA, IVB and VA, or a compound thereof. The molecular weight of the final polymer can be adjusted by the amount of the catalyst used. The heavy metal deactivator is added in an amount of 0.5- to 10-fold by weight of the catalyst in the latter half or after completion of polymerization. The heavy metal deactivator comprises, e.g. a hydrazine compound. The deactivator is added, and low-molecular components are moved by reducing the pressure and/or by an inert gas stream while the polymerization mixture is in a molten state or solid-phase state to give a high- molecular-weight polylactic acid with a low monomer content.

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